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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,559	01/26/2007	Franck Marandon	289351US0PCT	8180
22850 7590 12/17/2010 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER WIESE, NOAH S				
ART UNIT 1731		PAPER NUMBER		
NOTIFICATION DATE 12/17/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/577,559

**Applicant(s)**

MARANDON, FRANCK

**Examiner**

NOAH S. WIESE

**Art Unit**

1731

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-18 and 22-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-18 and 22-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-945)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/03/2010 has been entered.

### ***Status of Application***

2. Acknowledgment is made of the amendments filed 11/03/2010. Upon entering the amendments, the claims 46-51 are added and claims 15-16 and 18 are amended. The claims 15-18 and 22-51 are pending and presented for the examination.

### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 15-18 and 22-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forker, Jr. et al (US 4483700) in view of Craver (US 4817585).

Regarding **claims 15-16, 25, 27, 33, 35, 41, and 43**, Forker, Jr. et al (hereinafter "Forker") teaches a chemically strengthened glass that contains Na<sup>+</sup> and/or K<sup>+</sup> ions (see Abstract). The ions are present in a gradient over exchange depths greater than 100 μm (see Table 1, wherein DOL [depth of layer] of 10.7 mils is equivalent to 271.78 μm). The

surface compression (surface stress of these samples is at least 30.5 kg/mm<sup>2</sup> (299.1 MPa). The chemically strengthened glasses of Table 1 are prepared using a starting glass having a strain point of 581 °C (see column 5, lines 50-51). Thus, all of the limitations of instant claims 15-16, 25, 27, 33, 35, 41, and 43 pertaining to the glass pane are met by Forker.

Claims 15-16, 25, 27, 33, 35, 41, and 43 differ from Forker because Forker does not specify a use for the glass pane, and thus does not teach a cooker or oven comprising a door comprising said plane. However, it would have been obvious to one of ordinary skill in the art to modify Forker in view of Craver in order to use the Forker glass pane in a door for an oven and cooker because Craver teaches that panes in such doors are advantageously made from strengthened glass (see Abstract and column 5, lines 30-34). Said panes would be positioned in direct contact with a hot atmosphere because the atmosphere between the inner and outer panes in the window is not a vacuum, and thus would also be heated. Said atmosphere is therefore "hot".

One would have been motivated to use the Forker glasses in such an application because doing so would provide a commercially viable use for the Forker glasses; Forker does not teach any specific applications for the glasses of the patent, thus motivating one to look elsewhere for uses of chemically strengthened glass panels. One would have expected reasonable success using the Forker glasses in an oven door because Craver specifically teaches that tempered glasses are preferred in said doors. Therefore, claims 15-16, 25, 27, 33, 35, 41, and 43 are obvious and not patentably distinct over the prior art of record.

Regarding **claims 17-18**, Craver teaches that the oven of which the door is a part can be a wood burning stove, which is a pyrolytic oven.

Regarding **claims 22-24, 30-32, and 38-40**, as discussed above, Forker teaches chemically strengthened glasses meeting the compositional and property limitations of instant claims 15-16. Forker does not specify the interdiffusion coefficients of the glasses at 400°C and 490°C. However, because the Forker glasses are compositionally and structurally equivalent to the glasses of claims 22-24, 30-32, and 38-40, and because they have equivalent strain points (which are compositionally dependent properties in much the same way as interdiffusion coefficients), the glasses would inherently have interdiffusion coefficients at the two temperatures that would meet the limitations of the claims. Thus, all of the limitations of instant claims 22-24, 30-32, and 38-40 are met by the teachings of Forker.

Regarding **claims 26, 34, and 42**, as discussed above, the Forker glasses contain Na<sup>+</sup> and/or K<sup>+</sup> ions.

Regarding **claims 28, 36 and 44**, Forker teaches that the alkali ion-containing glasses are made into panels (panes) having thicknesses of 0.085" and 0.105" (see Table 1). These thicknesses are equivalent to 2.159 mm and 2.667 mm.

Regarding **claims 29, 37, and 45**, the claim differs from Forker as applied above because no specific example is taught were the glass is made into a pane having a thickness of 2.8-5 mm. However, as also discussed above, thicknesses of 2.667 mm are taught. The thickness of a glass pane depends on its intended use and is thus a result effective variable. One of ordinary skill in the art would have known and

understood techniques for making the Forker glasses into panes of a desired thickness, and would have had motivation for doing so from the need for a pane having a thickness between 2.8 and 5 mm. Thus, a pane having a thickness of 0.133 mm greater than the example taught by Forker would be obvious to one of ordinary skill from the Forker teachings. Claim 11 is therefore not patentably distinct over the prior art of record.

Regarding **claims 46-48**, as discussed above, Craver teaches inner and outer panes in the oven door. As also discussed above, obvious modification of Forker would lead to a glass containing alkali ions positioned to be in contact with a hot atmosphere. Therefore, the further limitations of the instant claims are taught by Forker in view of Craver, and the new claims are obvious and not patentably distinct over the prior art of record.

5. Claims 15-16, 18, and 22-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forker, Jr. et al (US 4483700) in view of Plumet et al (US 4048978).

Regarding **claims 15-16, 18, 25, 27, 33, 35, 41, and 43**, Forker, Jr. et al (hereinafter "Forker") teaches a chemically strengthened glass that contains Na<sup>+</sup> and/or K<sup>+</sup> ions (see Abstract). The ions are present in a gradient over exchange depths greater than 100  $\mu\text{m}$  (see Table 1, wherein DOL [depth of layer] of 10.7 mils is equivalent to 271.78  $\mu\text{m}$ ). The surface compression (surface stress of these samples is at least 30.5 kg/mm<sup>2</sup> (299.1 MPa). The chemically strengthened glasses of Table 1 are prepared using a starting glass having a strain point of 581 °C (see column 5, lines 50-51). Thus,

all of the limitations of instant claims 15-16, 18, 25, 27, 33, 35, 41, and 43 pertaining to the glass pane are met by Forker.

Claims 15-16, 18, 25, 27, 33, 35, 41, and 43 differ from Forker because Forker does not specify a use for the glass pane, and thus does not teach a cooker or oven comprising a door comprising said pane. However, it would have been obvious to one of ordinary skill in the art to modify Forker in view of Plumat et al in order to use the Forker glass in an oven door window because Plumat teaches that this is an advantageous use for chemically tempered glasses such as those taught by Forker. Plumat teaches a heat insulating screen used in an oven door comprising a chemically tempered pane of glass that separates the hot internal atmosphere from the ambient room atmosphere (see Figures 1 and 5 and column 5, lines 56-60). One would have been motivated to use the Forker glasses in such an application because doing so would provide a commercially viable use for the Forker glasses; Forker does not teach any specific applications for the glasses of the patent, thus motivating one to look elsewhere for uses of chemically strengthened glass panels. One would have expected reasonable success using the Forker glasses in an oven door because Craver specifically teaches that tempered glasses are preferred in said doors. Therefore, claims 15-16, 18, 25, 27, 33, 35, 41, and 43 are obvious and not patentably distinct over the prior art of record.

Regarding **claims 22-24, 30-32, and 38-40**, as discussed above, Forker teaches chemically strengthened glasses meeting the compositional and property limitations of instant claims 15-16. Forker does not specify the interdiffusion coefficients of the

glasses at 400°C and 490°C. However, because the Forker glasses are compositionally and structurally equivalent to the glasses of claims 22-24, 30-32, and 38-40, and because they have equivalent strain points (which are compositionally dependent properties in much the same way as interdiffusion coefficients), the glasses would inherently have interdiffusion coefficients at the two temperatures that would meet the limitations of the claims. Thus, all of the limitations of instant claims 22-24, 30-32, and 38-40 are met by the teachings of Forker.

Regarding **claims 26, 34, and 42**, as discussed above, the Forker glasses contain Na<sup>+</sup> and/or K<sup>+</sup> ions.

Regarding **claims 28, 36 and 44**, Forker teaches that the alkali ion-containing glasses are made into panels (panes) having thicknesses of 0.085" and 0.105" (see Table 1). These thicknesses are equivalent to 2.159 mm and 2.667 mm.

Regarding **claims 29, 37, and 45**, the claim differs from Forker as applied above because no specific example is taught where the glass is made into a pane having a thickness of 2.8-5 mm. However, as also discussed above, thicknesses of 2.667 mm are taught. The thickness of a glass pane depends on its intended use and is thus a result effective variable. One of ordinary skill in the art would have known and understood techniques for making the Forker glasses into panes of a desired thickness, and would have had motivation for doing so from the need for a pane having a thickness between 2.8 and 5 mm. Thus, a pane having a thickness of 0.133 mm greater than the example taught by Forker would be obvious to one of ordinary skill from the



Forker teachings. Claim 11 is therefore not patentably distinct over the prior art of record.

Regarding **claims 46-48**, Plumat teaches an oven door window comprising two pane of glass that are each chemically tempered (see column 6, lines 53-66). Thus, Plumat teaches an oven/stove door wherein the ion-containing glass pane is in direct contact with the hot atmosphere. The further limitations of the instant claims are thus taught by Forker in view of Plumat, and the new claims 46-48 are obvious and not patentably distinct over the prior art of record.

6. Claims 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forker, Jr. et al (US 4483700) in view of Plumat et al (US 4048978) and in further view of Gerhardinger (US 6024084).

Regarding **claims 49-51**, the claims differ from Forker in view of Plumat as applied above because Plumat does not teach an exemplary embodiments wherein the internal temperature of the oven (the temperature of the atmosphere in contact with one surface of the glass) is 300-530°C. However, it would have been obvious to one of ordinary skill in the art to modify Forker in further view of Gerhardinger et al in order to use the oven taught by Forker in view of Plumat in such a way as to have an internal temperature falling within the claimed range. Gerhardinger teaches an oven having a door comprising a tempered glass panel, and teaches that such ovens typically reach temperatures of up to 482°C during self-cleaning cycles (see column 1, lines 16-22). Thus, an obvious use of the oven taught by Forker in view of Plumat would be to heat it to this temperature. When used in this obvious manner, the Forker glass pane would

separate one atmosphere at a temperature falling within the instantly claimed range from a room temperature atmosphere, which is greater than 50°C cooler. Therefore, claims 49-51 are obvious and not patentably distinct over the prior art of record.

### ***Response to Arguments***

7. Applicant's arguments filed 11/03/2010 have been fully considered but are not persuasive. Applicant argues that because Craver calls for a strengthened glass and that this description can encompass a large variety of glasses, one of ordinary skill would have had no reason to use the Forker glass in an oven door. This is not persuasive because Craver does not call merely for any strengthened glass, but instated for a chemically tempered glass; this is precisely what Forker teaches. Contrary to applicant's assertion, the rejection is not based on one of ordinary skill "choos[ing] Forker in the application of Craver", but rather on the fact that one of ordinary skill would have understood from Craver that the Forker glass could be used as an oven window. As discussed previously, there is clear motivation for this modification from the introduction of a new commercial use for the Forker glass.

Applicant further argues that the amended claims are distinct over Forker in view of Craver because Craver teaches chemically tempered glass for the outer pane only. However, the limitations of the instantly amended claims call for the chemically tempered glass to be in direct contact with a hot atmosphere. Forker in view of Craver meets this limitation because the atmosphere between the panes would clearly be hot, as the heat resistant glass would not be a perfect thermal insulator. Therefore, this line of argument is not persuasive.

For the above reasons, applicant's arguments are not persuasive and the previously issued grounds of rejection are maintained.

***Conclusion***

8. No claim is allowed.
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Noah S. Wiese whose telephone number is 571-270-3596. The examiner can normally be reached on Monday-Friday, 7:30am-5:00pm EST.  
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.  
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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